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**THE EMANCIPATION OF AIRPOWER**

BY

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United States Air Force

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THE EMANCIPATION OF AIRPOWER

AN INDIVIDUAL STUDY PROJECT

by

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## ABSTRACT

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On 17 January 1991, air forces led by the United States banded together to extract the army of Iraq from the Emirate of Kuwait. This air campaign would be the decisive element of the Persian Gulf War and would be the most significant campaign in the history of airpower. The title of this paper is taken from a chapter in Major Alexander De Seversky's book on the use of airpower; Victory through Airpower, published in 1942. This paper analyzes early theories on the use of airpower; how airpower was misused; and how airpower evolved since World War II. For the first ninety years of powered flight, the promises and expectations for the employment of airpower as a military weapon exceeded its capabilities. Analysis is conducted as to what made the Persian Gulf Air Campaign different from the previous uses of airpower. Observations are made that airpower was at last employed as early air power theorists promised.

## Introduction

The creation of the United States Air Force as a separate service in 1947 was the result of many years of arguments as to what the real capabilities of airpower were and how they should be employed. Proponents of airpower centered their arguments around airpower as a new, often "misunderstood" capability that could not be properly executed or effectively employed by commanders whose feet were firmly planted on the ground.

Major Alexander De Seversky described the unique new capabilities of airpower and the need for airpower's freedom from the other services in his 1942 book, *Victory Through Airpower*, a chapter from which this paper's title comes. Seversky called the creation of a separate Air Force, "the emancipation of airpower"<sup>1</sup>. This paper is about the real "emancipation of airpower", an event that did not take place in the fall of 1947 when the Air Force won its independence, but in the winter of 1991, when, in the Persian Gulf War, airpower was effective, decisive, and conclusive in the greatest air campaign in the history of warfare.

## Early Years

In his major work on airpower entitled, *Il Dominio dell' Aria* ( *The Command of the Air*) Giulio Douhet wrote, " I have maintained, and continue to do so, that in the wars to come the decisive field of action will be the aerial field; and therefore it is necessary to base the preparation for and direction of the war on the principle: resist on the ground in order to mass your strength in the air." <sup>2</sup>

Douhet was one of the first airpower theorists to put together a comprehensive work on the use of the military airplane in war. He was not a leader in the employment of airpower but was one of a few individuals who was able to pull together all the known information of his time into one coherent product. Originally published just after World War I, Douhet's thesis began with a belief that airpower, being the new field of action, would become decisive. Airpower provided a tremendous opportunity to avoid the trench warfare of World War I, and move the battle to where it could be decided--in the air.

Douhet's beliefs were similar to those of Major Alexander De Seversky, who in 1942 published *Victory through Airpower*, a review of significant aspects of airpower and how it had and could lead to military successes. Seversky emphasized that although there still was some question as to just "what exactly" was the role of airpower in particular battles or campaigns, everyone was in agreement that aviation had "altered the traditional textbook

conceptions of strategy and tactics." <sup>3</sup>

Seversky was convinced of the capabilities of airpower as evidenced by the opening sentence in his book: "The most significant fact about the war now in progress is the emergence of aviation as the paramount and decisive factor in warmaking." <sup>4</sup> Seversky's motives may have been more directed to enhance the viability of an independent air force than for promoting the capabilities of airpower for its own sake.

At this same time General Billy Mitchell was also promoting airpower. Proclaimed by his admirers as a "Pioneer of Airpower", his unbending attitude in his advocacy of airpower would lead to his downfall. He differed from Douhet in that he initially promoted the "tactical" use of airpower rather than the "strategic" use. However, in the years after World War I, Mitchell changed his views. In *Skyways, A Book on Modern Aeronautics* he wrote:

The old theory, that victory meant the destruction of the hostile main army, is untenable. Armies themselves can be disregarded by airpower if a rapid strike is made against the opposing centers...the conceptions we have always had that wars must be waged by armies and navies must be revised, as these two branches of the military service will take a position second to that of airpower and will act principally as aide to it. <sup>5</sup>

Mitchell was moving towards the view of Douhet--that of strategic bombardment being the promise of airpower. The Strategic Bombing theory of airpower was well on its way to driving American combat aviation for the next twenty years.

If airpower was accepted as the new and decisive field of battle, did this assure victory for the possessor of superior airpower capability? Achieving "air superiority" in itself did not mean victory. Achieving "command of the air" meant also being able to exploit it to your advantage. Douhet described it this way:

To become the essential factor in victory, the Independent Air Force must therefore meet two conditions:

1. It must be capable of winning the struggle for the command of the air.
2. It must be capable of exploiting the command of the air, once it has been conquered, with forces capable of crushing the material and moral resistance of the enemy.<sup>6</sup>

Douhet went on to explain:

The first of these conditions is essential, the second is integral. An Air Force which meets the first condition only--that is, one which is capable of winning the struggle for the command of the air but is not able to exploit it with forces sufficient to crush the resistance of the enemy, will be in a position to (1) prevent its own territory from being subjected to aerial offenses of the enemy; and (2) subject all the enemy's land and sea territory to aerial offenses--without, however, having enough offensive power to crush the material and moral resistance of the enemy. In other words, an independent Air Force which meets only the first condition cannot decide the issue of the war, which will then depend upon other circumstances besides the aerial warfare. But an Independent Air Force which meets both conditions, essential and integral, decides the issue of the war without regard to any other circumstances whatever.<sup>7</sup>

Douhet's theories (strike at the enemy's heartland) and Mitchell (a demonstrator and crusader) along with the results of



limited bombing in World War I led to development of airpower doctrine in the post-war era.

Airpower Doctrine based principally upon the idea of independent air operations had begun as early as 1926 when the Air Service Field Officers School published *Employment of Combined Air Force*. This document for the first time articulated the idea that the basic air objectives were the enemy's vital centers and his air force. Douhet's influence was available at the school as early as 1921 in *Command of the Air* and significantly influenced the content of *Employment of Combined Air Force*.<sup>8</sup>

After 1926, the theories of Douhet and Mitchell dominated airpower thinking and led the way to strategic bombing becoming the dominant theory of airpower employment. This thinking evolved even though tactical airpower employed in the preparation of the Normandy beachhead prior to D-Day would become one of the most significant uses of airpower. Although the Strategic Bombing Campaign was well underway by June 1944, it was the isolation of the battlefield by allied airpower that allowed ground forces to land and advance on the beaches of France.

Strategic bombing was one of the most controversial aspects of military strategy debates during the war. In 1940, Field Manual 1-5, *Employment of Aviation of the Army*, reflected the position of the U.S. Army prior to the start of World War II:

Military aviation constitutes a powerful weapon for the conduct of strategic air operations and support of operations of the field forces.<sup>9</sup>

Douhet would not have written it this way, however Mitchell could have lived with both tactical and strategic uses of airpower.

Douhet, Mitchell and Seversky--having formulated their own airpower theories, have been admired and criticized for their beliefs on the preeminence of airpower in war. Edward Warner, in his 1943 essay: *Douhet, Mitchell, Seversky: Theories of Air Warfare*, assessed the validity and impact of each airpower proponent on the development of airpower doctrine.

According to Warner, Douhet overestimated the effect of bombing civilian populations and Mitchell was not really a great thinker, but rather one who could put together a coherent package bringing out selected ideas. Seversky was helped considerably by a Disney movie produced from his book although Warner felt it showed a simplistic nonviolent, non-lethal , bloodless execution of war from the air. <sup>10</sup>

In *Victory Through Airpower*, Seversky noted that many who studied military history in the United States in the early 1940's had "jumped to a rash conclusion that airpower alone could not achieve a definitive victory over an enemy." Their assumptions were based on the Battle of Britain. Seversky replied:

The fact that the Germans failed to knock England from the air decidedly does not mean that knockouts from the air are impossible. It means only that Germany was not properly prepared to do it.

German failure over England was not a failure of air power but of German vision--a failure to exploit fully potentialities of the new weapon already in existence.

We may fairly say that for more than a year

Germany was stabbing at the British with a pen knife, hoping to bleed it to death."<sup>11</sup>

According to Seversky, the German failure to defeat the British with airpower was due to four basic errors in how they employed airpower:

1. The attempted strategic bombardment of a nation without sufficient combat power to eliminate or neutralize the opposing air power. If German bombers, instead of carrying three machine guns, had been equipped with turrets like the British bombers, each housing four machine guns, Hitler would have been spared his 4 to 1 ration of losses.

2. A mistaken choice of the vital target. Those thousands of planes and pilots invested in striking at London might have been expended more intelligently against key industrial centers; against production units of the aviation industry, especially those related to the fighter command.

3. Inadequate bombing power, in relation to the load carrying capacity of aircraft at that time.

4. Lack of continuity of action. The bombing was frequently interrupted due to the lack of a clear strategic picture and requisite tactical preparations. The interruptions obviously gave the British air forces and people invaluable breathing spells for repairing damage, replenishing energies and utilizing the experience for more efficient resistance in the next stage.<sup>12</sup>

He summarized this misuse of airpower as, "The Germans used the wrong kind of air force, in the wrong way, in the wrong place."<sup>13</sup>

The war in North Africa led to the development of Air Force unique doctrine. American and British air lessons learned from North Africa and the Mediterranean led to the development of a new

field manual on the command and employment of airpower; a document that many thought was the Air Force's declaration of independence. FM 100-20, *Command and Employment of Air Power*, stated, "land and air power were coequal and independent forces," and that airpower must be "centrally controlled and employed by an air commander."<sup>14</sup>

By 1942, those who had great expectations for the aerial bombing of population centers were becoming discouraged. Seversky wrote:

It had been generally assumed that aerial bombardment would quickly shatter popular support. Progress of this war has tended to indicate that this expectation was unfounded.

On the whole, indeed, armed forces have been more quickly demoralized by air power than the unarmed city dwellers.

The will to resist can be broken in a people only by destroying effectively the essentials of their lives--the supply of food, shelter, light, water, sanitation, and the rest. This clearly demands precision bombing rather than random bombing."<sup>15</sup>

It was 1943 which separated the "new" and "old" periods of airpower doctrine evolution. The period 1926-1942 had been characterized by air elements being controlled by army field commanders who decided where and when aircraft assigned to them would be used.

Tactical air operations were much better understood than strategic uses of airpower. In *American Strategy in World War II*, Kent Roberts Greenfield asks the question, "What did they mean by strategic bombing?" According to Greenfield:

The term requires definition because it is inexact. It carries a charge of aspiration, if not of boastfulness. It implies that the kind of air offensive to which it refers is the only kind of offensive that is truly strategic. What the term, as used in World War II, actually meant was massive and systematic bombing of the enemy's war economy and of the enemy populations' will to resist.<sup>16</sup>

Airpower had progressed from the small (but significant, from a morale standpoint), B-25 raid on Tokyo in 1942 to the 1944 thousand plane raids on the industrial capacity of Germany. On the European front, airpower had mixed reviews. There was no single use of airpower that stood out more than the others. With the impending invasion of France--all efforts both strategic and tactical were considered as preparation for the culminating event and not an end unto themselves.

Did the vision for airpower promised by Douhet, Seversky and perhaps Mitchell exceed the capabilities of airpower? It probably did as was very well described by Davis MacIsaac in his essay *Voices from the Central Blue: The Air Power Theorists*:

Their vision of the role air power could play in warfare invariably outran the reality of the moment, provoking disappointment among the converted and derision from the unbelievers.<sup>17</sup>

Two parallel events had taken shape: the first was the development of the aircraft industry and the subsequent production of large quantities of aircraft and the other was the conclusion that the air arm should have its own leadership--an event that occurred in 1941 when the Army Air Force came into existence.

Even with this gigantic push, the American airpower enthusiasts did not see the fruits of their labors until late in

the war. In 1942, the British were already engaged in strategic bombing of Germany including massive raids such as the 1,000 bomber raid against Cologne in May.<sup>18</sup>

Although the War Department's BOLERO-ROUNDUP Plan would have consolidated American Strategic Bomber forces in England, President Roosevelt launched all available forces to North Africa, resulting in what General Arnold called, "dispersal of power even before we really had it."<sup>19</sup>

When enough strategic bombers became available in 1943, the results were near disaster, for the American desire to commence daylight strategic bombing led to massive losses of B-17s. British Air historians have even called it, "a tragic defeat."<sup>20</sup>

In the Pacific, the defeat of Japan can be more closely tied to the use of strategic airpower. The massive firebombing raids conducted in the spring of 1945 destroyed 58 Japanese cities. Was this a use of airpower per Douhet by targeting the populace or was the war making capability targeted since the Japanese had dispersed their war making capability into the populace via cottage industries?<sup>21</sup>

The dropping of the atomic bombs on Japan and the subsequent surrender of the Emperor as the last events of World War II would be the events that would form the basis of much that would be written about the capability of airpower in the post-war years.

The leaders of the American air forces found it very difficult to objectively assess the results of World war II. The Strategic Bombing Survey conducted for Europe after the war led to the belief

that in a matter of months, Allied bombing would have brought about the surrender of Germany even if the Allies had not invaded France in 1944.<sup>22</sup>

The aspiration of the early air chiefs to fight and win the war on their own were not realized. Each attempted to implement what he knew from air doctrine development between the wars. Kent Roberts Greenfield said it well when he characterized their approach as:

The resultant system of doctrines may fairly be termed a military theology since it could not yet be verified by experience.<sup>23</sup>

Greenfield, in his 1963 work entitled, *American Strategy in World War II*, summarized the state of affairs between the old guard and the new airpower leadership:

In the new system of air doctrine the supreme goal and mission of air power was strategic bombing. Its missions in co-operation with land forces were redefined under three heads, in a fixed order of priority. The first was to cripple the enemy's air force and gain control of the air. The second was to isolate the battlefield on a wide arc by bombing and strafing the enemy's approaches to it and the movement of his troops and supplies to it. The third was direct support on the field of battle. Only by strictly observing this order of priority could a modern air force realize the advantages of its mobility and speed, economize its power, and co-operate efficiently with army forces.

This concept of co-operation clashed with the War department's traditional doctrine of air power. That doctrine gave the air arm the duty of holding an umbrella over each force of ground arms engaging the enemy, and providing it with eyes that could see far ahead, and shoot out the eyes of the enemy. The new air force recognized these as its duties. But it

proposed to raise its umbrella over the whole theater of operations, instead of providing one for each division, corps, or army. The speed and mobility of its planes would enable them to provide a local umbrella when necessary. The new air leaders put this duty of direct support lowest in their order of priorities. They regarded it as difficult, wasteful, and seldom likely to be necessary.

24

### The Post War Years

World War II had shown that the bomber could in fact, make a considerable contribution to defeating the enemy.

As airpower planners began work on the postwar air force, they realized that the bureaucratic infighting that was present in the prewar years would again return. The real issue in the services' infighting was whether the air force would draw off funding from the other services if it became in itself a separate service.

Air Force leaders began to make their final play for independence under varying uncertain circumstances. Although the results of aerial bombing in the war were evident, the ongoing controversy about what size of standing army the United States was to have after the War was working for them. When the issue of Post World War II universal military training (UMT) was resolved, it was the development of airpower that dealt the death blow to the UMT program.



To General Spaatz, Commanding General of the Army Air Forces, airpower was the key:

Strategic bombing is thus the first war instrument of history capable of stopping the heart mechanism of a great industrialized enemy. It paralyzes his military power at the core.<sup>25</sup>

All efforts of the times were not put towards development and refinement of Strategic Air Forces. Tactical support of ground forces was high on the Army Air Forces(AAF) agenda. The 70 Group AAF being planned would contain light and medium bombers and certain fighter groups which would be formed into a model tactical air force acceptable to the Army Ground forces.<sup>26</sup>

However, the Army Ground Forces knew that in reality, the postwar Air Force was planning to build much of its power around the strategic bomber.

The Ground forces had proposed support aviation within their own units as they believed the AAF would give low priority to equipping and training tactical units designed to support ground operations.<sup>27</sup>

During the planning for the postwar Air Force, the issue of "strategic" verses "tactical" could have, but was not resolved. As early as 1946, General Kenney, who would later become Commander of Strategic Air Command, expressed his views for not liking the words "tactical" and "strategic". He thought that "all types of aircraft and air organizations could do both kinds of missions." He also felt that "to divide Army Air Force organizations into tactical and strategic was to help the Army in its attempts to obtain an

integral air force."<sup>28</sup>

The views of the Army Chief of Staff , General Eisenhower, would play a significant role in the final Air Force organization. In a memo to the Secretary of Defense he restated his long--held position:

Basically, the Army does not belong in the air --it belongs on the ground... Control of the tactical Air Force means responsibility... for the entire operating establishment required to support these planes. This includes the requisite basic air research and development program necessary to maintain a vital air arm and the additional specialized service forces to support the arm....assumption of this task by the Army would duplicate in great measure the primary and continuing responsibilities of the Air Force and, in effect, would result in the creation of another air establishment.<sup>29</sup>

In January 1946 General Spaatz, directed that three major Air Force Commands be formed: Strategic Air Command, Tactical Air Command, and the Air defense Command.<sup>30</sup> General Spaatz would later recall that " Eisenhower and I thought along the same lines about this thing. I certainly would not call it pressure."<sup>31</sup>

The debate over a separate air force continued until September 18, 1947 when the Department of the Air force and the United States Air Force were established. On the eve of the Air Force's creation, the final report of the War Department Policies and Programs Review Board underscored that " Air Power had become the first line of defense."<sup>32</sup> The board noted that the nation would only support a small peacetime army. Traditions, the board noted. must give way to facts. It also noted that, "In arriving at the size of the peacetime Air Force, the favorable psychological effect of air-

power in being and the adverse psychological effect of lack of airpower are factors of much greater importance before the initiation of hostilities than are the state of readiness or existence of other types of forces."<sup>33</sup>

### Airpower in Korea

The outbreak of the Korean War in June 1950 caused a significant dilemma for American War planners.

An early review of the situation led planners to move away from the limited nuclear war option. There were few attractive targets for tactical nuclear weapons because of the lack of concentration of North Korean forces and the many alternative routes of advance afforded the enemy by the Korean terrain. Further, the Allied forces were retreating in such disarray that it was unrealistic to suppose that we could promptly turn them around for a counterattack in which nuclear weapons could provide the basic firepower.<sup>34</sup>

Airpower in Korea would be used much in the same way it was used in World War II. Tactical airpower would support the army ground forces and strategic bombers, due to limited strategic targets, would complement tactical air by interdicting lines of supply and reinforcement.

The use of airpower was a significant aspect of the Korean War from the perspective of what should be done when the strategic centers of gravity become elusive. The North Koreans had moved

their capital, and most of the supplies used to fight the war came from outside North Korea. This posed a problem for proponents of strategic bombing of the enemy's industrial might and warmaking capability.

In 1951, Air Force Chief of Staff, General Hoyt S. Vandenberg, described the use of airpower north of the Yalu River:

Air power, and especially the application of strategic air power, should go to the heart of the industrial centers to become reasonably efficient. Now, the source of the material that is coming to the Chinese Communists and the North Koreans is from Russia. Therefore, hitting across the Yalu, we could destroy or lay waste to all of Manchuria and the principal cities of China, if we utilized the full power of the United States Air Force.... However, in doing that, we are bound to get attrition. If we utilize less than the full power of the United States Air Force, in my opinion, it might not and probably would not be conclusive.... And even if we utilized it and laid waste to it there is a possibility that it would not be conclusive. But the effect on the United States Air Force, with our start from approximately 40 groups, would fix it so that, should we have to operate in any other area with full power of the United States Air Force, we would not be able to.<sup>35</sup>

General Vandenberg stressed that all we had was a "shoestring Air Force." He continued:

The fact is that the United States Air Force is operating a shoestring air force in view of its global responsibilities.

Starting from a forty-odd-group Air Force, the aircraft industry is unable until almost 1953 to do much of a job toward supplying the airplanes that we would lose in war against any major opposition.

In my opinion, the United States Air Force is the single potential that has kept the balance of power in our favor. It is the one thing

that has, up to date, kept the Russians from deciding to go to war.

In my opinion, we cannot afford to, what I would like to call, peck at the periphery as long as we have a shoestring Air Force.

While we can lay the industrial potential of Russia today waste, in my opinion, or we can lay the Manchurian countryside waste, as well as the principal cities of China, we cannot do both, again because we have got a shoestring air force. We are trying to operate a \$20 million business with about \$20,000.<sup>36</sup>

This account by General Vandenberg puts into perspective the dilemma facing the United States Air Force of the time. If it were to proceed with a significant bombing campaign against either China or Russia, the attrition would be so significant that it would render the Air Force impotent for years to come.

With the strategic bombing campaign limited to North Korea, B-29s pressed forward with their attacks on what war making capability was available for bombing. Although only 2.5 per cent of the B-29 effort was employed in strategic attacks, the medium bombers effected an average of 55 per cent destruction on the industrial targets of the strategic bombing list.<sup>37</sup>

However, because the North Koreans drew most of their logistical supplies from beyond their borders, the strategic campaign lacked decisiveness in terms of the ground fighting in South Korea.<sup>38</sup>

The key issue in the use of airpower in the Korean War was to what extent the U. S. had the capability to wage a strategic campaign outside Korea (i.e. Manchuria or Russia) and still maintain its global commitments. Attrition would have had a

significant effect on the capabilities of the air force to respond to any other global contingency should one arise. Air Force leaders were unwilling to decimate their bombers in an isolated war when those very bombers represented the deterrence required to keep Russia from entering the war.

After the agony and expense of Korea, a popular position was that we would never fight another war like Korea. If a limited war should start, nuclear weapons could be used to end it. But the way to prevent such wars would be to maintain military and political pressure against potential instigators. If the outside support for a limited conflict was neutralized, the conflict itself would soon die for lack of weapons and supplies.<sup>39</sup>

#### Airpower in Southeast Asia

Discussion of the use of airpower in the Viet Nam War centers around whether the use of strategic bombing, as it was employed just prior to the final cease fire, could have achieved the same effect if it had been employed earlier.

In *The Limits of Airpower*, Mark Clodfelter writes, "In the final analysis, the supreme test of bombing's efficacy is its contribution to a nation's war aims." Clodfelter analyzes, *Rolling Thunder*, *Linebacker I* and *Linebacker II*, the three main air campaigns against North Vietnam in terms of how they supported

America's aims:

Evaluating the political efficacy of the three air offenses required first identifying the specific aims guiding each. The goals were disparate; not only did they vary from campaign to campaign, but many of them restricted the application of airpower. These latter goals, achievable only by limiting military force, are termed, "negative" objectives. "Positive " objectives are those that were attainable only by applying military power.

He cites this example:

President Johnson's positive political goal in Vietnam was an independent, stable, non-Communist South, but he also pursued the negative aim of avoiding direct intervention by the Chinese or Soviets.

The negative goals dominated U. S. strategy. Clausewitz asserts:

A preponderantly negative policy will...  
"retard the decision" in war.

Resulting in:

Political controls on airpower flow directly from negative objectives, and that the respective emphasis given to positive and negative aims can affect air power's political efficacy.<sup>40</sup>

Few historians could argue that the bombing campaign of 1972 brought an end to the Vietnam war for America. There are many wide and varied views as to why the strategic bombing of North Vietnam worked when it did. One needs to look at the objectives of previous air campaigns and even more--to who was president during those campaigns.

President Johnson had looked to airpower to help achieve his positive goals of an independent, stable, non-communist government

in South Vietnam. At the same time he limited *Rolling Thunder* bombing campaigns because of his negative objectives--to prevent a third world war and to keep both domestic and world public attention focused away from Vietnam.<sup>41</sup>

President Johnson lacked the courage, leadership, confidence and proper advice to make the right decisions on the war. A greater war effort would have siphoned off funds he had planned to spend on his "Great Society" program.

For example: On the eve of the first *Rolling Thunder* mission, National Security Advisor McGeorge Bundy argued that bombing would bolster South Vietnamese morale; Ambassador Maxwell Taylor, that it would break Hanoi's will to fight; Secretary of State Dean Rusk, that it would secure bargaining leverage; and Secretary of Defense Robert S. McNamara, that it would convey America's political resolve to Hanoi. <sup>42</sup>

Things were different under President Richard Nixon. His positive political goal was an American withdrawal that did not abandon South Vietnam to an imminent Communist takeover. This aim was much easier to achieve than one of assuring a democratic stable government in the south. The President did not allow advisors (other than Henry Kissinger) to influence the *Linebacker* Bombing Campaigns. Negative goals had a marginal impact on the Nixon application of airpower.

The war was characterized as a "guerrilla campaign" up until the Tet offensive of 1968, when the decimation of the Viet Cong made way for the more conventional army of North Viet Nam to carry



the fighting. The Easter offensive of 1972 made the North's army vulnerable to airpower. For the first time in Vietnam, bombing conformed to Clausewitz's "principle of Polarity": It attacked an objective that was essential for a communist victory. Doctrine and morality, *Rolling Thunder's* two most significant military controls, now suited the conflict.<sup>43</sup>

The theories of airpower that dominated the early years of the war were structured around the belief that strategic bombing of the enemy would indeed cause him to surrender. However, the targets selected and bombed were not necessarily those that kept the North Vietnamese and their Viet Cong counterparts executing the war in the south. Just as in Korea, where the enemy was elusive and did not obtain its supplies from an industrialized infrastructure, the enemy in Vietnam, until such time as it became a conventional war was able to continue its war effort. It was only after the very existence of North Vietnam was threatened did it attempt to stop the war by agreeing to peace terms.

Airpower chiefs hailed the success of *Linebacker I and II* as evidence that airpower had been the decisive factor in the war. It was only when the political and military objectives finally merged under President Nixon that this decisive factor became a reality. The final campaign had been executed in a manner that airpower was designed to be employed. General William W. Momyer, Commander of 7th Air Force in Vietnam from 1964-1968, in *Airpower in Three Wars*, wrote: "Airpower can be strategically decisive if its application is intense, continuous, and focused on the enemy's

vital systems."<sup>44</sup>

#### Possession versus elimination.

The history of warfare between nations can be characterized as large ground or naval forces locked in linear battle on fronts separated by short distances. The distances continued to become greater over the years as man developed weapons he could use instead of engaging in hand-to-hand combat. It was also necessary to physically remove the capability to fight from the enemy soldiers. It was essentially necessary to remove his weapons, accomplished by invasion and occupation by ground forces.

*The Victory Through Airpower*, Seversky discusses *Possession vs. Elimination* with respect to the objectives and goals of the attacking forces. If the attacker's intent is to use the resources and capabilities of the threatened nation, he must fight a war of possession. For example, the Germans needed airfields in their conquered nations to enable them to advance to additional countries. However, British aims were to totally wreck the German economy and industrial base; to eliminate the German state.<sup>45</sup>

If the goal is possession, then airpower assumes the supporting role of interdicting enemy supplies, destroying its communication facilities and supporting ground forces in contact with the enemy.

However, if elimination is the objective, then airpower takes an entirely new approach. In this situation, airpower takes the lead role. An example of this would be the bombing of Japan in

World War II. Elimination, not possession was the desired approach and outcome.

Seversky described the war of possession as more difficult, more costly in manpower, and more hazardous for the nation undertaking it. The hardships increase enormously with the increase in the size of the invaded country and the distance of the theater of operations from friendly bases.<sup>46</sup>

The issue of *elimination* versus *possession* , leads to the eventual emancipation of airpower in the Persian Gulf War in 1991.

### The Gulf War

The Persian Gulf War of 1991 has been called many things, from an anomaly to an example of warfare in the future. There are many differing opinions as to why the coalition forces led by the United States defeated the armed forces of Iraq with such speed and with so few casualties . Some cite the overwhelming technological superiority of the coalition forces and others cite the military ineptness of the Iraqi leadership as major factors in the coalition victory. The debate over why this victory was so quick and overwhelming will be settled by historians; however, there is one point upon which they will probably all agree, and that will be that the air campaign conducted against Iraq was the most intense and comprehensive use of aerial warfare in the history of powered flight.

After some 85 years, airpower would, in the Persian Gulf War,

fulfill the promises made by generations of airpower advocates. Airpower was *different* now and it could be employed intensely, accurately, decisively and conclusively.

The airpower enthusiasts of the early 1900's promoted the airplane as the decisive factor in the wars of the future. For the United States, the only demonstration of this capability was when the B-29 *Enola Gay* dropped the atomic bomb on Hiroshima, Japan in 1945. In this case--airpower was decisive--and most of all, conclusive. In Korea, airpower was prevented from being used to its fullest potential by a fledgling air force that was attempting to maintain a greater commitment than it was capable of achieving and the political implications of bombing strategic targets in Manchuria and Russia. In Vietnam, the political mismanagement and lack of leadership at the national level failed to unleash airpower until 1972, and when it was unleashed, brought an end to the war.

Several changes that occurred after the Vietnam War would have a significant affect on the outcome of the Persian Gulf War, twenty years later. These were the modernization of the Tactical Air Forces with highly capable and reliable aircraft with the ability to perform their mission not only during the day, but at night and in marginal weather; development of precision guided munitions; realistic training for aircrew and support personnel such as RED FLAG; joint command and control exercises for the leadership and Unity of Command for the involved air forces. It was described by Lt General Charles A. Horner, the Joint Forces Air Component Commander(JFACC) this way:

The *Desert Storm* air campaign story begins long before the first bomb struck Baghdad at 0300 on 17 January 1991. Actually, the preparation began in the mid-1970s as the US Air Force began a detailed analysis of the years of combat in Vietnam. The experience gained during our involvement in Southeast Asia proved invaluable in our preparation, planning and execution in Southwest Asia. Time and again, we would draw on our memories and experiences. People who fail to study their history are destined to repeat it, and we, the United States, were bound and determined not to make the same mistakes that had so frustrated our military effort in Vietnam.<sup>47</sup>

The post-Vietnam War era had brought with it an extensive and indepth analysis of military spending programs and specifically, tactical airpower. During the late days of the war, many new technologies had emerged including the use of laser-guided bombs. Since a large amount of money was being spent on new high-tech weapons, questions began to surface as to whether the U.S. was going the right direction in its weapons procurement programs.

All did not go well for the emerging technologies. In 1979, Franklin C. Spinney, a civilian analyst in the Pentagon assigned to the Office of the Secretary of Defense charged with evaluating U. S. Tactical Air programs, aggregated his concerns into a briefing entitled, "Defense Facts of Life". This briefing, also known as the *Spinney Report*, was the largest single source of arguments, examples, and supporting data that challenged the department's approach to high technology in modern theater war.<sup>48</sup>

Shortly after the *Spinney Report* surfaced, near disaster struck. On 28 June 1980, the Air Forces' 1st Tactical Fighter Wing, equipped with F-15s, failed an operational readiness inspection,

the acid test for measuring a unit's war fighting capability. Events such as this fueled the high-tech weapons debate.<sup>49</sup>

The debate was centered in the Military Reform movement, consisting of an "inner circle", a braintrust that generated the fundamental ideas and initiatives. It consisted of about 12 people, all of which had been challenging military planning and programs for over a decade.<sup>50</sup>

The Reformers specific case against high-tech weapons rested on a "general relationship" between weapons complexity and low combat readiness. They suggested that increased weapons complexity multiplied reliability and maintainability problems while increasing the cost of ownership (especially maintenance).<sup>51</sup>

The debate was not lost on deaf ears. It was significant for the following reasons: (1) The funding of high-tech programs would take a specific pattern and this debate would affect that pattern, (2) The debate would test the public's confidence in its military leaders, (3) the real and perceived readiness of U. S. combat forces would be made a matter of public record, and could expose vulnerabilities, and (4) the progress of the debate over the long term would influence and shape the character of U. S. defense forces for the rest of the century.<sup>52</sup>

The Department of Defense response centered around seven elements of the debate: (1) reformers did not understand or appreciate modern USAF theater warfighting concepts; (2) the United States had to spend more on defense and sustain the increases for the foreseeable future; (3) the underfunding of defense in the 1970s

was causing the readiness problems of the 1980s; (4) the latest generation of weapons had been denied a fair chance to enter the force and mature; (5) high-tech weapons are an essential part of America's arsenal because they contribute high leverage in the balance with Soviet capabilities; (6) disadvantages of the more complex high-tech weapons are offset by the unique flexibility and capability they provide; and (7) high-tech weapons are not synonymous with low readiness. They will work if properly funded, supported and updated.<sup>53</sup>

How this debate affected the Persian Gulf war of 1991 is significant. The Military Reform movement, because of the high technology involved, sought to forfeit the capabilities of:

- (1) Night Combat Operations.
- (2) Poor Weather Operations.
- (3) Air Superiority over Soviet-controlled territory.
- (4) Most of the electromagnetic dimension of war, if not all of it.<sup>54</sup>

These capabilities would be essential to the execution of the air campaign and the coalition victory in the Persian Gulf War.

The Air Campaign objectives were as follows: (1) destroy/neutralize air defense command and control; (2) destroy nuclear, biological and chemical storage and production capability; (3) render ineffective national and military command, control and communications infrastructure; (4) destroy key electrical grids and oil storage facilities; (5) deny military supply capability; (6) eliminate long-term offensive capability; and

(7) disrupt and weaken Republican Guard forces.<sup>55</sup>

The Air Campaign began on 17 January 1991 and would last forty-three days. Coalition forces had control of the skies by the end of the second day. The Iraqi Air Force would essentially cease to exist after four days. Once the strategic objectives of the campaign were met, bombing focused on preparation of the battlefield, although even the strategic bombing of Baghdad was part of that preparation by cutting the command and control links between the leadership in Baghdad and the forces in Kuwait.

The air campaign was not massive bombing. The Air Force's tonnage expenditure in the Gulf War was less than four per cent of that expended against Germany, and less than one per cent of the tonnage dropped in Southeast Asia. In measures of tonnage dropped per month, the Gulf War ranked significantly below Vietnam, and was only 85 per cent of that in World War II.<sup>56</sup>

Airpower was, after 85 years, coming into its own. The promises made by Douhet, Mitchell and Seversky were being fulfilled every night in the skies over Iraq and Kuwait.

Speaking before the Senate Armed Services Committee on 21 February, three days before the ground offensive started, General Colin Powell, USA, Chairman of the Joint Chiefs stated:

Air power is the decisive arm so far, and I expect it will be the decisive arm into the end of the campaign, even if ground forces and amphibious forces are added to the equation... If anything, I expect air power to be even more decisive in the days and weeks ahead.<sup>57</sup>

The ground war would last four days - and the war would end.

What was the real role of airpower in the coalition's dramatic



victory? For the most part, lines are being drawn along service loyalties. This should be expected. How forces were employed and contributed to the victory will significantly affect funding for future programs in all services.

The Iraqi Air Force was equipped with some of the most modern tactical aircraft. However, they were essentially noneffective for the entire war effort. No coalition aircraft were shot down by Iraqi aircraft.

Prewar, the Iraqi Air Force launched approximately 55 combat aircraft and 40 support sorties per day. During each of the first five days of the war, they flew 25 combat sorties and 90 support sorties. After nine days of taking losses, the Iraqi Air Force began to flee to Iran. Back at home, over 30 per cent of the Iraqi Air Force was destroyed on the ground. Of the 594 aircraft shelters in Iraq, 375 were destroyed.<sup>58</sup>

Air Force aircraft losses were extremely low--14 aircraft--a loss rate of .00047--one twentieth of one per cent. A loss rate of one-half of one per-cent would have been considered optimistic prior to the war.<sup>59</sup>

The Iraqi Army was characterized is a formidable one. They were equipped with modern weapons made in the Soviet Union and the west. Its troops were combat experienced, having spent eight years in a ground war with Iran.

The Iraqi ground forces were targeted from the first day of the war. They were dug in along the border, and once the war started, they had no place to go. Using everything from the B-52 in

its conventional role , to A-10s, the coalition set out to prepare the battlefield.

Seversky's 1942 expectations were about to come true--a field army was about to be demoralized on the battlefield. It was described well in *The Iraqi Army's Defeat in Kuwait* by James W. Pardew in *Parameters*, the U. S. Army War College Quarterly:

As Iraq recognized its vulnerability to attack and the damage mounted from the air campaign, the Iraqi public lost enthusiasm for Saddam's Kuwait policy. The loss of national commitment spread to the military and drained the Iraqi soldiers in Kuwait of their will to fight.

This loss of will ultimately was devastating to Iraqi defenses. As the air war continued, the commitment of forces deteriorated further and Iraqi desertion rates climbed, leaving many units at low combat effectiveness because of serious personnel shortages.

The most significant contribution was the psychological effect of air attacks on Iraqi forces. With public commitment already wavering, exposed Iraqi troops in the Kuwait theater endured extensive aerial bombardment with no means to retaliate.<sup>60</sup>

The air campaign cut off the Iraqi leadership from the Army in southern Iraq and Kuwait with its strategic bombing campaign, and all but destroyed the Iraqi field army. Just prior to the start of the ground war, the Commander of the coalition forces, General Norman Schwarzkopf was quoted in the *Washington Post*:

(The)allies are destroying two battalions(100+) of Iraqi tanks per day, and(their) military is "on the verge of collapse"<sup>61</sup>

What made the air campaign effective and decisive was not

just its intensity, but its accuracy.

A single strike aircraft in the Gulf War carrying two "smart bombs", the kind that Military Reformers of the late-1970s did not want the Defense Department to buy, could function as effectively as 108 World War II B-17 bombers carrying 648 bombs and crewed by 1,080 airmen.<sup>62</sup> The F-15s in the Gulf, the same type that failed their Operational Readiness Inspection at Langley in 1979, had a wartime Mission Capable rate of 93.7 per cent.<sup>63</sup>

Strategic Airpower, in the form of the F-117 Stealth fighters were able to operate undetected over Baghdad and bomb the will of the enemy populace--much as Seversky had foretold almost 50 years earlier.

Airpower was decisive--but was it conclusive? Definitions of the terms do not help. *Funk and Wagnalls Dictionary* defines them as follows:

conclusive *adj.* Putting an end to a question; decisive.

or,

decisive *adj.* Ending uncertainty or dispute; conclusive.

If airpower was indeed both decisive and conclusive, will it always be? It will depend on what the objectives of the campaign are. Seversky's *Elimination or Possession* theory merits another look.

Was it necessary for coalition ground forces to take possession of Kuwait? Probably not *in this case*. The objectives of the war included removing the Iraqi forces from Kuwait. The Air Campaign nearly destroyed the Iraqi field army in Kuwait or if it

was not destroyed, rendered it combat noneffective. Evidence of this point resides in the large number of Iraqi soldiers that surrendered without a fight. The Iraqi field army in Kuwait was ready to surrender--not fight.

Can airpower make a field army surrender? This time it did.

If the objective is to possess the disputed terrain, then it is unlikely that airpower can be decisive(or conclusive). Ground troops will have to occupy the disputed area. But this does not mean that airpower cannot prepare the battlefield to the extent that very little resistance is offered by the enemy.

This point brings issue with current AirLand Doctrine as subscribed to by the Army and the Air Force's Tactical Air Command. TRADOC Pamphlet 525-5 states the following:

...Thus, the national military strategy is based on twin pillars of Maritime and AirLand Operations to promote national security, to deter aggression, to project power throughout the globe, and, when required, to fight decisive land battles.<sup>64</sup>

There has always been a conflict between the Air Force and the Army over support of ground forces. The Army only recognizes the Air Force's capability when that capability is used to support the Army ground forces. Part of the problem is service parochialism. An example is how TRADOC Pamphlet 525-5 is written as illustrated above. The Army does not recognize the Air Force as one of those "pillars" upon which to base this country's National Military Strategy. Even Army Field Manual 100-5, *AirLand Battle*, places airpower in a subordinate role in every case except nuclear

weapons. The Persian Gulf War gave new meaning to the FM 100-5 phrase, "... and when required, to fight decisive ground battles." There may be times in the future when, depending on the objectives of the campaign, a ground war may not be necessary.

The Army, to this day, fails to see itself in a supporting role. However, the Persian Gulf War was the ideal opportunity for airpower to accept its new role as the pre-eminent and dominating force in warfare in the future.

### Conclusion

The Emancipation of Airpower brings with it new responsibilities. The world has come to expect precision delivery of weapons that destroy targets--not people. Television coverage of the Persian Gulf War gave the average citizen the perception that individual targets are easily selected , targeted and destroyed--without massive loss of life. In the coming period of defense budget reductions, it is those capabilities that must not be sacrificed. The high-technology weapons of the post-Vietnam War days are what brought us the precision destruction without massive loss of life.

The emergence of airpower as the dominant force in modern warfare requires that air forces continue to support ground forces when decisive ground battles are required.

The Persian Gulf War proved that armor on the battlefield is

no longer safe--day or night. The proliferation of high-tech weapons throughout the world has made ground force on ground force combat a very costly endeavor. AirLand Battle is in reality, now only one application within the capability of airpower.

After 85 years, airpower is now different and as the dominant force in warfare, it can be used swiftly and effectively to achieve a nation's strategic goals.

## Endnotes

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<sup>2</sup>Giulio Douhet, *The Command of The Air* (New York: Coward-McCann, 1942), 25.

<sup>3</sup>Seversky, 3.

<sup>4</sup>*Ibid.*, 3.

<sup>5</sup>General William Mitchell, *Skyways, A Book on Modern Aeronautics* (1930), 255-257. as quoted in Donald D. Frizzell, *Early Theories of Air Strategy*, *Military Strategy*, Vol. 7, (U. S. Army War College, Carlisle Barracks, Pennsylvania), 20.

<sup>6</sup>Douhet, 98.

<sup>7</sup>*Ibid.*, 98.

<sup>8</sup>Department of the Air Force, Office of Air Force History, *Planning and Organizing the Postwar Air Force 1943-1947*. by Herman S. Wolk, (Washington D.C.: 1982), 10.

<sup>9</sup>Early Theories of Air Strategy, Donaldson D. Frizzell quoting "Comparative Analysis of Air Doctrine," Military Employment Division, Air Command and Staff College (1965), *Military Strategy*, 7 (August 1973), 33.

<sup>10</sup>David MacIsaac, "Voices from the Central Blue: The Air Power Theorists" in *Makers of Modern Strategy from Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton: Princeton University Press, 1986), 630.

<sup>11</sup>Seversky, 70.

<sup>12</sup>*Ibid.*, 72.

<sup>13</sup>*Ibid.*

<sup>14</sup>Department of the Air Force, *Basic Doctrine of the United States Air Force*, (Washington D.C.: Government Printing Office, 1985), 23.

<sup>15</sup>Seversky, 145.

<sup>16</sup>Kent Roberts Greenfield, *American Strategy in World War II: A Reconsideration*, (Baltimore: John Hopkins Press, 1963), 88.

<sup>17</sup>MacIsaac, 626.

<sup>18</sup>Greenfield, 91.

<sup>19</sup>Ibid.

<sup>20</sup>Ibid., 93.

<sup>21</sup>General T. Ross Milton, "Strategic Airpower: retrospect and Prospect", *Strategic Review* 19 (Spring 1991): 46,

<sup>22</sup>Greenfield, 86.

<sup>23</sup>Ibid.

<sup>24</sup>Ibid., 101.

<sup>25</sup>*Planning and Organizing the Postwar Air Force*, 41.

<sup>26</sup>Ibid., 126.

<sup>27</sup>Ibid., 126.

<sup>28</sup>Ibid., 179.

<sup>29</sup>Ibid., 129.

<sup>30</sup>Ibid., 130.

<sup>31</sup>Ibid., 130.

<sup>32</sup>Ibid., 180.

<sup>33</sup>Ibid., 181.

<sup>34</sup>William W. Momyer, *Airpower in Three Wars*, (Washington, D.C. Department of the Air Force, 1978), 3.

<sup>35</sup>Congress, Senate. Committee on Armed Services and Foreign relations. *Military Situation in the Far East* (Washington: Government Printing Office, 1951), 1025.

<sup>36</sup>Ibid.

<sup>37</sup>Department of the Air Force, Office of Air Force History, *The United States Air Force in Korea, 1950-1953* (Washington D.C.: Government Printing Office, 1955), 455.

<sup>38</sup>Ibid., 195.



<sup>39</sup>Momyer, 6.

<sup>40</sup>Mark Clodfelter, *The Limits of Airpower, The American Bombing of North Vietnam*, (New York: MacMillan, Inc., 1989), xi.

<sup>41</sup>Ibid., 205.

<sup>42</sup>Ibid., 204.

<sup>43</sup>Ibid., 206.

<sup>44</sup>Momyer, 339.

<sup>45</sup>Seversky, 105.

<sup>46</sup>Ibid., 108.

<sup>47</sup>Lt General Charles A. Horner, USAF, "The Air Campaign" *Military Review* Vol LXXI (September 1991), 16.

<sup>48</sup>Walter Kross, *Military Reform: the High-Tech Debate in Tactical Air Forces* Washington, D.C.: (Government printing Office:1985), 10.

<sup>49</sup>Ibid., 10.

<sup>50</sup>Kross, 14.

<sup>51</sup>Ibid.

<sup>52</sup>Ibid., 21.

<sup>53</sup>Ibid., 19-20.

<sup>54</sup>Ibid., 186.

<sup>55</sup>Horner, 21-22.

<sup>56</sup>Department of the Air Force, *The United States Air Force in the Gulf War*, (September 1991), 30.

<sup>57</sup>Congress, Senate, Armed Services Committee, Transcript of testimony of General Colin Powell, USA, Chairman of the Joint Chiefs of Staff (21 February 1991).

<sup>58</sup>Department of the Air Force, *The United States Air Force in the Gulf War*, (September 1991), 32.

<sup>59</sup>Ibid., 34.

<sup>60</sup>Pardew, James W. Jr. "The Iraqi Army's defeat in Kuwait." *Parameters* Vol XXI, No 4., (Winter 91-92), 18-20.

<sup>61</sup>Strategic Studies Institute, U. S. Army War College, *Special Report, Desert Shield and Desert Storm, A Chronology and troop list for the 1990-1991 Persian Gulf Crisis*, (25 Mar 1991), 67.

<sup>62</sup>*The United States Air Force in the Gulf War*, 31.

<sup>63</sup>*Ibid.*, 35.

<sup>64</sup>Department of the Army, Training and Doctrine Command, *AirLand Operations: A Concept for the Evolution of AirLand Battle for the Strategic Army of the 1990s and Beyond*. (August 1991), 3.

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